

Studies in the African Agrilinae, Coraebini I. (Coleoptera; Buprestidae)

by

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The genus *Kerremansia* Péringuey is reviewed with *K. paradoxa* Péringuey = *K. junodi* Obenberger **syn. nov.** *K. arcuata* Péringuey is transferred to *Pseudokerremansia* **gen. nov.** A new genus and species, *Cupriscobina loranthae*, is described for a series of specimens recently collected by the authors. The affinities of these three genera are discussed and the three species are fully illustrated.

The genus *Kerremansia* was erected by Péringuey (1908) for two new species, *K. paradoxa* and *K. acuta*. Obenberger (1931) subsequently described a third species, *K. junodi*.

At the time of the description of *Kerremansia*, Péringuey stated that 'the species . . . are found holding by means of their arcuate legs to the edge of the leaves of plants which they thus devour laterally'. Péringuey believed the shape of the first two pairs of legs to be the most significant character and related *Kerremansia* to the oriental genus *Toxoscelus* Deyrolle. A label on the type of *K. paradoxa* written by Kerremans states his opinion that *Kerremansia* 'should come next to the Australian genera *Alcinous* Kerremans (Deyrolle) or *Synechocera* Deyrolle' (Péringuey 1908). The genera that would come nearest *Kerremansia* are *Toxoscelus* which occurs no closer than India and *Cryptodactylus* Deyrolle which differs markedly in the structure of the legs. Obenberger (1931) described the genus *Strandietta* for two species from the Congo (Zaire). This was synonymized under *Cryptodactylus* which contains a total of five species from Africa (Burgeon 1941). Further study is needed to determine whether these species of '*Cryptodactylus*' are indeed congeneric with the Asian species. An examination of the Indian *C. cyaneoniger* Kerr. shows many differences with *Kerremansia*, most significantly in the structure of the legs and the sculpture of the head, pronotum and elytra. No African species of '*Cryptodactylus*' were available for study.

The three coraebine genera treated in this paper form an apparently closely related group of isolated relics in southern Africa. The three previously described species of *Kerremansia* Péringuey were all based on single specimens. As one of these species turned out to be a synonym, and a fair series of another species was discovered, we were in a position to re-assess this interesting group of species and their generic positions.

Collecting data is given as in descriptions or on labels of type specimens; current or corrected names and grid references are added in parentheses.

It should be noted that starting with species described herein, all buprestid holotypes originating from material collected by this department will be deposited in the Transvaal Museum and kept in care of the Department of Entomology, University of Pretoria. In addition, all buprestid holotypes currently housed in this department will also be similarly deposited.

Abbreviations for collections which supplied material and/or have new type material deposited therein are as follows:

- ACAS —A. Cobos collection, Almeria, Spain.
- BMNH—British Museum (Natural History), London, Great Britain.
- CHAC —H. A. Hespenheide collection, Univ. of California, Los Angeles, U.S.A.
- CLBC —C. L. Bellamy collection, Pretoria.
- GAWC —G. A. Williams collection, Lansdowne, N.S.W., Australia.
- GHNC —G. H. Nelson collection, Pomona, California, U.S.A.
- HAHC —H. & A. Howden collection, Ottawa, Canada.
- MNHN—Museum National d'Histoire Naturelle, Paris, France.
- NCI —National Collection of Insects, Pretoria.
- NMB —National Museum, Bloemfontein.
- NMP —Narodni Museum, Prague, Czechoslovakia.
- SAM —South African Museum, Cape Town.
- RLWE —R. L. Westcott collection, Salem, Oregon, U.S.A.
- TM —Transvaal Museum, Pretoria.
- WIN —State Museum, Windhoek.

Genus *Kerremansia* Péringuey

Kerremansia Péringuey, 1908: 309; Obenberger 1931: 194; 1935: 806.

Type species: *Kerremansia paradoxa* Péringuey (new designation from subsequent monotypy).

Size small; pronotum laterally strongly arcuate; dorsolateral portion of abdominal sternites convexly swollen; metacoxal plates slightly dilated laterally, with lateroapical angle obtusely rounded, with posterior margin slightly sinuate; first two pairs of legs with femora swollen, distally slightly arched and with tibiae strongly arcuate; dorsolateral portion of abdominal sternites convexly swollen; metacoxal plates slightly dilated laterally, with lateroapical angle obtusely rounded, with posterior margin slightly sinuate; first two pairs of legs with femora swollen, distally slightly arched and with tibiae strongly arched; tarsal claws basally broad, entire.

Kerremansia superficially resembles *Pseudokerremansia* **gen. nov.** but is actually closer to *Cupriscobina* **gen. nov.** It also has a strong resemblance to *Cryptodactylus*. The arcuate shape of the first two pairs of legs also suggests an affinity of *Kerremansia* with *Stringulia* and *Toxoscelus*.

Kerremansia paradoxa Péringuey, Figs 1, 2 & 3.

Kerremansia paradoxa Péringuey, 1908: 310; Obenberger 1931: 194; 1935: 806.

Kerremansia Junodi Obenberger, 1931: 194; 1935: 806. **syn. nov.**

Size small: 11.0–12.0 × 3.0–4.0 mm; elongate; shining black; dorsal surface of legs with bluish purple reflection; head closely punctate with recumbent white setae;

pronotum finely rugose; elytra with large, shallow, sparse punctures and very short recumbent setae.

Head slightly produced between large eyes; inner margin of eyes slightly diverging dorsally; four mildly convex tubercles on frons, in dorsal and ventral pairs, medially separated by longitudinal groove extending from vertex to above antennal foveae; transverse groove between eyes, below ventral pair of frontal tubercles; antennal insertions small, closely spaced, opening into transverse excavations, extending laterally to eyes; epistome with medial acute arcuation dorsad to broadly arcuate margin, lateroapically carinate, confluent with gena, forming a ridge around mouthparts; antennae with segment 1 curved, widest distally, longer than segments 2 and 3 together; segments 2 and 3 subequal, 2 wider; 4 longer than 3, wider distally; antenna elongately serrate from segment 5–10; 11 elongate, curved; segments evenly, closely punctate.

Pronotum wider than head, $1.6 \times$ wide as long; widest at basal $\frac{1}{3}$; anterior margin bisinuate, with a median lobe; lateral margins irregularly arcuate up to the angulate basal $\frac{1}{3}$, margins laterally carinate and strongly dorsoventrally explanate; basal margin strongly bisinuate with base truncate anteriorly of scutellum; disc irregular, centrally elevated, anteriorly with longitudinal shallow groove up to basal $\frac{1}{3}$, laterobasally are two broadly excavated diagonal depressions becoming confluent mediobasally between two small tubercles, and running up to discal elevation; depressions bordered laterally by diagonal carinae extending to apical $\frac{1}{3}$, these in turn bordered laterally with tubercles along basal $\frac{1}{3}$; lateroapical area with elongate depressions from basal $\frac{1}{2}$ not quite up to apex; surface with network of irregularly parallel short carinae; scutellum large, subtriangular, anterior margin arcuate.

Elytra widest at base, slightly narrower than pronotum; mediobasally with two tubercles, one on each side, opposite median truncate lobe of pronotum and scutellum; these tubercles and humeral swellings separated by short diagonal depression; disc irregular, flattened with broad, slightly elevated swellings, laterally at apical $\frac{1}{3}$ and discally at apical $\frac{1}{3}$; lateral margins sinuate from basal to apical $\frac{1}{3}$ with lateral margins of abdomen visible from above; margin narrowing gradually to slender, separately rounded apices; lateroapical margin finely serrate; pygidium with slight apical keel, margin widely acuminate.

Underside: prosternum strongly convex up to margins, proepisternal surface punctured between irregularly parallel short carinae; prosternum with large contiguous punctures with short white semi-erect setae, process broadly truncate and medially acuminate, apical margin broadly and shallowly triangularly arcuate with longitudinally transverse fine striae between proepisternal sutures; meso- and metasterna and abdominal sternites punctured laterally with parallel striae and recumbent setae; disk of sternites 2–5 broadly shallowly arcuate; sternites with lateral swellings; sternite 5 marginally carinate, broadly rounded to wide truncate apex, with moderately dense testaceous setae covering apical $\frac{1}{3}$.

Legs: pro- and mesofemora slightly swollen, flattened, slightly arcuate; metafemur less swollen; all femora with two parallel rows of small tooth-like tubercles, each with apical bristles; pro- and mesotibiae arched and spatulate, in repose only touching femora at base and apex; pro- and mesotibiae dorsoapically excavate for reception of tarsi; metatibiae elongate and only slightly curved; tibiae each with short,



wide apical spine; tarsi with segments 1–4 subequal, each with apical pulvillus, gradually longer to segment 4, with segment 5 elongate, slightly shorter than 1–4 taken together; claws broad basally, flattened.

Genitalia as in Fig. 3

MATERIAL EXAMINED.; holotype of *paradoxa*, male (SAM): SOUTH AFRICA: Transvaal, Zoutpansb., Shilovane, H. Junod, 1903; holotype of *junodi*, male (TM): same locality, Nov. 1906, H. Junod (Shilouvane SE 23 30 Cd).

Obenberger's type of *K. junodi* differs only by being slightly smaller.

Genus *Pseudokerremansia* gen. nov.

Kerremansia Péringuey (part), 1908: 309; Obenberger 1931: 194; 1935: 806.

Type species: *Kerremansia arcuata* Péringuey, 1908: 310.

Size small; pronotum laterally slightly arcuate; dorsolateral portion of abdominal sternites evenly rounded; metacoxal plates laterally strongly dilated up to the acutely angulate lateroapex, margin strongly sinuate; femora and tibiae flattened, tibial margins carinate.

Pseudokerremansia differs from *Kerremansia* in many important respects. These differences include the shape of the pronotum and the configuration of the depressions and carinae on the pronotal disc; the dorsoventral orientation of the lateral pronotal carinae; the lateroapical angles of the pronotum; the elytral punctation and contours of the elytral depressions and elevations; and the shapes of the prosternal process and lateral areas of abdominal sternites.

Pseudokerremansia arcuata (Péringuey) comb. nov., Figs 4 & 5.

Kerremansia arcuata Péringuey, 1908: 310; Obenberger 1931: 194; 1935: 806.

Size small: 6.0 × 1.8 mm; elongate; body ventrally arcuate when viewed from side; shining black; punctation on head and pronotum irregularly striate, on elytra vaguely transversely striate.

Head: slightly produced between eyes; inner margin of eyes slightly diverging dorsally; frons and vertex each with a pair of mild tubercles separated by longitudinal groove; frons with slight medial depression below tubercles channeled between antennal foveae; antennal foveae small, closely spaced, with diagonally transverse excavation laterally for basal antennal segments; epistome bisinuate under antennal foveae to medial acumination; antennal segments with 1 curved and wider distally, 2 as wide as 1 and subequal to 3, 3 elongate and wider distally, 4 shorter than 3 and subserrate, antenna serrate from segment 5, 6–10 elongately serrate, 11 elongate and curved.

Pronotum: wider than head, 1.3× wide as long, widest at middle; anterior pronotal margin biarcuate with median lobe, lateral margins arcuate, basal margin bisi-

Figs 1–16. *Kerremansia paradoxa* Péringuey, 1) dorsal view, 2) lateral view, 3) ♂ genitalia; 4–5, *Pseudokerremansia arcuata* (Péringuey), 4) dorsal view, 5) lateral view; 6–8, *Cupriscobina loranthae*, **sp. nov.**, 6) dorsal view, 7) lateral view, 8) ♂ genitalia; 9–13, *Lepidoclema magna*, **sp. nov.**, 9) dorsal view, 10) lateral view, 11) frontal view, 12) tarsal, 13) ♂ genitalia; 14–16, *Lepidoclema parva*, **sp. nov.**, 14) lateral view, 15) frontal view, 16) ♂ genitalia. Dorsal and lateral views to scale in upper right hand corner; all other figures to double scale.

nuate, disc irregular with large depressions as follows: one central, large, circular before middle, posteriorly narrowed into elongate longitudinal groove extending to base; on either side one wide, elongate groove from base to apical $\frac{1}{3}$, longitudinally in line with eye, laterally bordered by carina from just anterior to base up to opposite apical $\frac{1}{3}$ of margin; a narrow elongate groove bordering the previous laterally and extending anterior to beyond the carina; scutellum small, triangular and finely punctate.

Elytra: widest at base, narrower than pronotum; lateral margins subparallel, broadly concave up to apical $\frac{1}{3}$, exposing dorsolateral abdominal sternites 1 and 2, then narrowing gradually to separately rounded, finely serrate apices; disc flattened, uneven; one small mediobasal declivous lobe on either elytron; humeri elevated diagonally, extending centrad to before basal $\frac{1}{3}$; small longitudinal swelling between humeri and suture; small, laterodiscal swelling just posterior to apical $\frac{1}{3}$; large, anteriorly declivous-preapical swelling; pygidium centrally carinate up to elongate apical spine.

Underside: prosternum with disc convex, finely rugose; process narrow, slightly wider preapically, broadly acuminate, with prelateral carina entire on perimeter; metasternum discally convex; abdominal sternites 1-4 strongly convex, sutures transverse; last visible sternite discally flattened with preapical truncate margin; apex flattened perpendicularly to dorsal surface with a series of short, posteriorly pointed, flattened carinae.

Legs: femora slightly flattened, fusiform; tibia flattened, margins carinate; femora and tibiae striatopunctate; tarsi with segments 1-4 short, subequal, each with pulvillus, increasing in length distally, segment 5 longer than others taken together; tarsal claws missing.

MATERIAL EXAMINED. Holotype, female (SAM): Southern Rhodesia, Sebake (ZIMBABWE SE 19 30 Ab).

Péringuey (1908) differentiated between *K. paradoxa* and *P. arcuata* using only the size difference and shape of the pronotum. As previously discussed, he also placed much importance on the arcuate first two pairs of legs as a way of relating *Kerremansia* to genera extant at the time. Curiously though, the first thing one notices when examining the type of *P. arcuata* is the lack of similarity in this character with *K. paradoxa*. The general facies of these two species are quite similar, but they differ in many important respects as discussed under the generic descriptions. Based on the difference between male and female specimens of the closely related *Cupriscobina* **gen. nov.**, the difference between the shape of the last visible abdominal sternite is thought to be sexual. The differences between *P. arcuata* and *K. paradoxa* are more than sufficient to warrant separate generic rank.

Genus *Cupriscobina* **gen. nov.**

Type species: *Cupriscobina loranthae* **sp. nov.**

Size small; pronotum laterally strongly arcuate; dorsolateral region of abdominal sternites arcuately excavated; metacoxal plates laterally dilated up to obtuse distal angle, posterior margin bisinuate; first two pairs of legs dilated and tibiae arched as in *Kerremansia*; tarsal claws bifid.

ETYMOLOGY. The name is a combination of the Latin prefix *cupri* (copper) and suffix *scobina* (a rasp).

Cupriscobina differs from *Kerremansia* and *Pseudokerremansia* at first glance in colouration and sculpture. *Cupriscobina* is similar to *Pseudokerremansia* in the lateral configuration of the pronotum (Figs. 5, 7). *Kerremansia* and *Cupriscobina* share the arched and dilated first two pairs of legs. The three genera are immediately separated by using the shape of the metacoxal plate. The only other african genera which may be confused with these three are *Nastella* Kerremans and *Strigulia* Kerremans which both differ from the three genera here discussed by having the metacoxal plates not dilated laterally. *Strigulia* shares the arcuate legs with *Cupriscobina* and *Kerremansia* but differs in many other respects, especially in the entire sculpture and in the abdomen, which is entirely obscured from above.

***Cupriscobina loranthae* sp. nov., Figs 6, 7 & 8.**

MALE. Size: 7.3–9.1 × 2.2–2.6 mm.; elongate; surface shining cupreous; head and pronotum with contoured carinae over discal elevations, finely rugose between carinae with sparse recumbent white setae; elytra with close, short, transverse carinae; irregular transverse setal pattern more or less in three bands, over apical $\frac{3}{4}$.

Head produced between large eyes, with two pairs of elevations; one on vertex, one on frons; elevations divided longitudinally and transversely by even depressions; eyes with inner margins diverging above; frons with short supraantennal carina on each side, separated and slightly dilated anteriorly; laterodorsal margin of antennal foveae slightly thickened, finely punctate; antennal foveae large, diagonally oriented, internal margin carinate; carinae diverging to broadly arcuate, anteriorly dilated epistome; epistome laterally grooved up to gena for reception of basal antennal segments; antennae with segment 1 wide and elongate, 2 shorter and slightly wider than 1, 3 basally narrowed and subequal to 2 in length and width, 4 shorter than 3, antenna elongately serrate from segment 5–10 with length increasing relative to width distally, 11 elongate.

Pronotum wider than head, 1.4 × wide as long; widest posteriad of middle; apical margin bisinuate with central, anterior pointing lobe; apical margin with perimeter finely punctate; lateral margin angularly arcuate, carinate; basal margin angularly bisinuate with finely punctate lobe anterior of scutellum; disc irregular with central depression from apical $\frac{1}{4}$ to base laterally with central bilobed elevations and mild broad convexities basally; large broad deep depression laterad of disc on each side, these laterally bordered by strongly bisinuate carinae, reaching neither base nor apex; scutellum triangular, length 2 × width, basally depressed, rugose.

Elytra narrower than pronotum, widest at humeri; basal depression between each humerus and suture; discal surface slightly irregular in basal $\frac{1}{2}$; lateral margin concave from behind humeri up to apical $\frac{1}{4}$ thus exposing laterodorsal aspect of basal abdominal sternites, rounded in apical $\frac{1}{4}$ up to slightly separated rounded and serrate apices; apex of each elytron with one strongly, posteriorly elevated and anteriorly declivous swelling; pygidium with central keel on distal half up to elongate apical spine.

Underside: prosternum with disc convex, slightly flattened centrally; entire apical margin with flattened lobe, finely punctate with deep narrow, transverse groove posteriad; prosternal process slightly swollen up to lateral angles, apex acuminate; dorsally visible abdominal sternites with lateral excavations; disc of sternites separated from explanate, dorsolateral portion by prelateral grooves; sternites convex except for 5, all flattened with medioapical depression up to preapical margin, centrally arcuate; last visible abdominal sternite with medial arcuate excavation.

Legs: femora thickened, with very slightly indicated double row of tooth-like tubercules on ventral surface, slightly arcuate distally at tibial insertion; pro- and mesotibiae flattened and arcuate, slightly dilated preapically and dorsally excavated for tarsi up to the slightly arcuate spine; metatibiae straight, flattened, otherwise as pro- and mesotibiae; tarsi with segments 1-4 short, subequal, each with pulvillus, which are longer on distal segments; segment 5 elongate, slightly swollen apically; claws bifid, internal half of claw shorter.

Genitalia as in Fig. 8.

FEMALE. Differs from male by having dorsolateral aspect of last visible sternite produced posterioventrad, forming broad lobe, perpendicular to dorsal surface, transversely serratocarinat. Size: 8,3-10,5 × 2,5-3,3 mm.

MATERIAL EXAMINED. Holotype ♂ (TM): SOUTH AFRICA: Transvaal, Saartjesnek, S25.46, E27.54, 12.xi.1983, C. L. Bellamy, sitting on leaves of *Loranthus zeyheri*; paratypes: 11 ♂, 9 ♀, same data as holotype except: 12-17.xi.1983, beating foliage of *L. zeyheri*; 4 ♂, 5 ♀, same data except: 18-20.xi.1983; 4 ♂, 3 ♀, same data except 23-29.xi.1984, H. & A. Howden; 1 ♂, 2 ♀, same data except 1-2.xii.1984, C. L. ♂, 2 ♀, Roodeplaat Dam, 10.11.1979, J. Boomker (UP); sex unknown, same data except 23-29.xi. 1984, H. and A. Howden; 1 ♂, 2 ♀, same data except 1-2.xii. 1984, C. L. Bellamy and D. d'Hotman. Paratypes deposited in ACAS, BMNH, CHAH, CLBC, GAWC, GHNC, HAHC, MNHN, NCI, NMB, NMP, RLWE, SAM, TM and WIN.

ETYMOLOGY. The name is derived from the plant genus *Loranthus*, the probable host.

Cupriscobina loranthae is clearly separated from *K. paradoxa* and *P. arcuata* by the different coloration and sculpture. A single female specimen from Natal is believed to be another species and is not included in the type series.

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